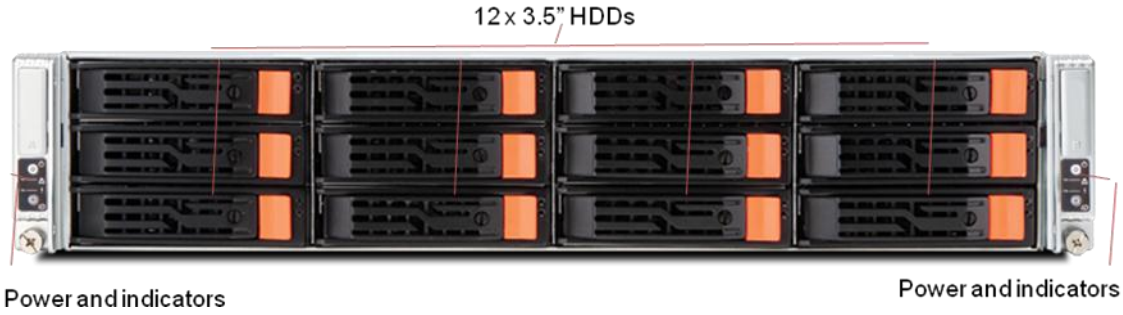
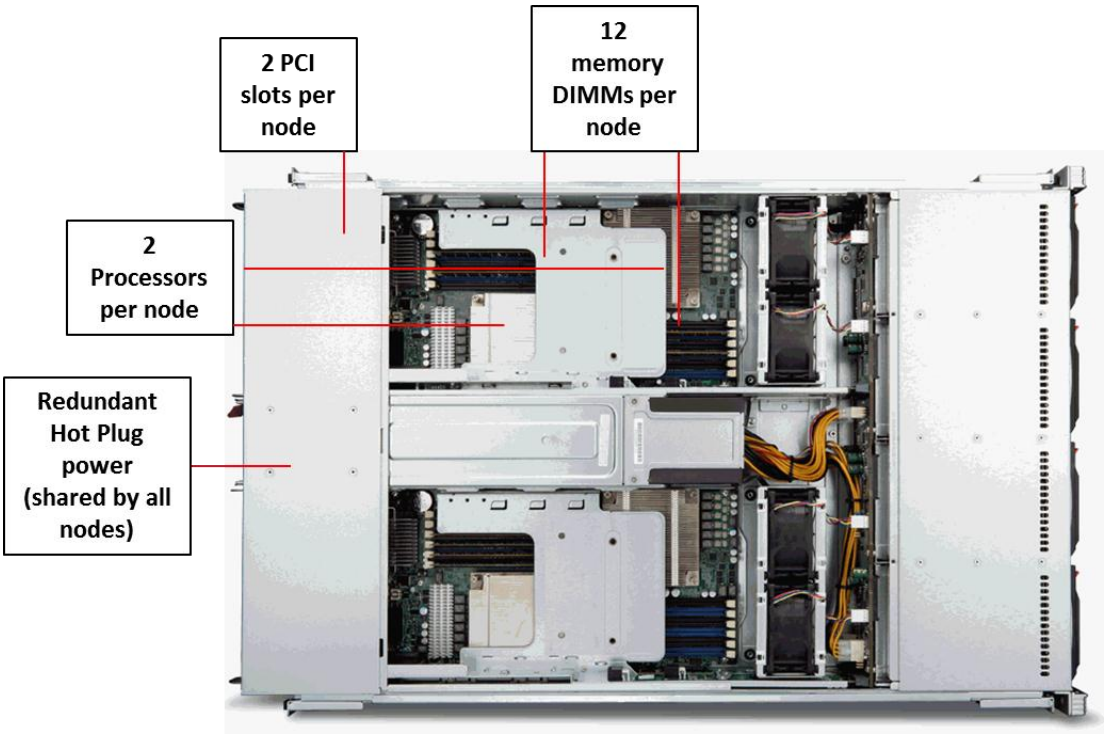
Acer AW2000ht w/ AW170htx F1 Specifications

Product Overview

The Acer Gemini AW2000ht w/AW170htx is a high performance and highly configurable multi-node server designed for peak power efficiency and maximum component efficiency in a space-saving rack form factor.

Product Front View

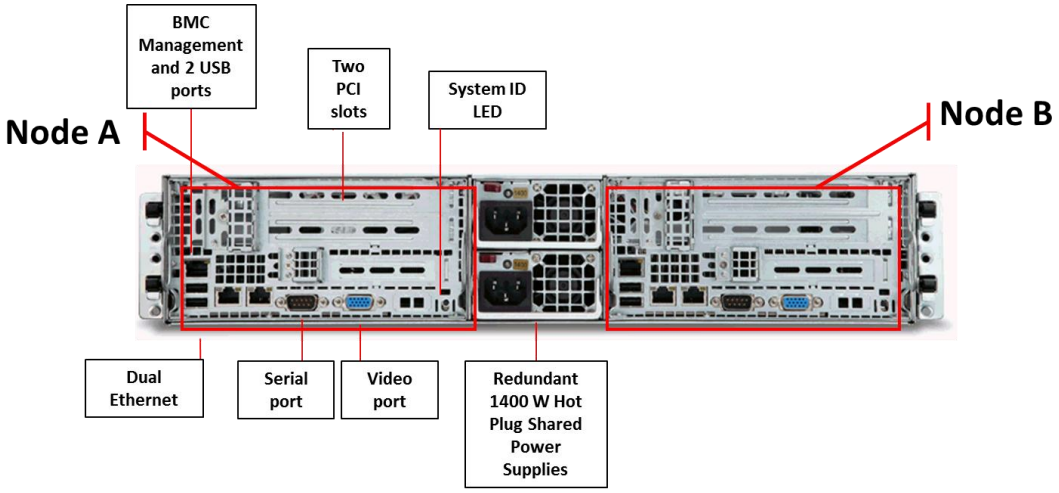




Product Inside View (per node):

12 x ECC DDR3 1066/1333 MHz registered or unbuffered ECC DIMMs (24 total per enclosure)
2 x Intel® Xeon® 5600 Series processors supporting up to 6-cores per processor (4 total per enclosure)
2 x 1400 W Gold level (90% efficiency) hot-pluggable power supply
4 x dual-rotor system cooling fans
Power button, System ID button, LED indicators (Power, HDD activity, LAN 1-2 status, system ID/status/fault) (2 total per enclosure)
Support for up to six 3.5" hot-pluggable SATA hard disk drives (12 total per enclosure)
2 x PCI Express® slot (PCI Express x8)

Product Rear View (per node):



2 x USB 2.0 connectors
Management IPMI LAN connector
COM (Serial) connector
Video connector
2 x Gigabit LAN connectors
ID LED

What's New?

- nVidia Tesla GPU support
- 2 x 1400 W 80PLUS® gold-level efficient power supply units (1+1 redundant, hot-pluggable)
- InfiniBand with QDR connection (AW170htq models)

Product Specifications (per node)

Nodes[1]

- Up to two AW170ht F1 nodes with standard PCIe® 2.0
- Up to two AW170htq F1 nodes with standard PCIe® 2.0 and QDR InfiniBand

Processors and chipset

- Up to two Intel® Xeon® 5600 series processors
- Chipset: Intel® 5520 (AW170hq nodes) and 5500 (AW170ht nodes)

Memory[2]

- Memory capacity:
  - Registered DIMM: 2, 4, 8, 16 GB[3]
  - Unbuffered DIMM: 2, 4 GB
- Up to 192 GB using registered DIMMs when fully populated with 2 DIMMs per channel, 12 slots
- Up to 48 GB using unbuffered DIMMs when fully populated with 2 DIMMs per channel, 12 slots

Network controllers

- 2 x Integrated Intel 82574L single port Gigabit Ethernet Controllers (2 ports total per node)

[1] Any of the node options can be used together
[2] Mixed use of registered memory and unbuffered ECC memory not supported
[3] 16 GB memory modules available by special request only

Storage
- Hard disk form factor: 3.5”
- Type: SATA with hot plug capability
  - 3.5" SATA HDD capacity: 250GB, 500GB, 1TB, 2 TB
- HDD Capacity (enterprise level):
  - 3.5" SATA HDD capacity: 250GB, 500GB, 1TB, 2 TB
- 3.5” Maximum capacity:
  - Up to 12 TB SATA (2 TB 3.5" x 6 HDDs)

Storage Controllers
- Integrated Intel® ICH10R Serial ATA host controller (six 3 Gb/s SATA ports) with RAID 0, 1, 5 support
- Optional PCIe® 4-port SAS HBA

Expansion slots
- Two PCI-E x8 slots per node, supporting 2 x Full-height PCIe® cards (Standard configurations utilize the x8 riser card)
- One PCI-E x16 slot supporting 1x Full-height, double-thick PCIe® card (GPU configurations only)

Management
- Acer Smart Server Manager
- System ID LED buttons, System Health LED
- Acer Smart Console for server management and KVM over IP remote management

Deployment/serviceability
- Acer Smart Setup
- BIOS Update Tool
- IPMI Firmware Update Tool

Operating systems
- Windows Server® 2008
- Windows Server® 2008 R2
- Windows Server® 2003
- Red Hat® Enterprise Linux 5.4
- SuSE® Linux Enterprise Server 11
- VMware ESXi™ 4
- VMware ESX™ 4

Input/output interface

Front
- One Power/off button
- LED indicators: power, HDD activity, LAN port 1 through 2, and ID

Rear
- Two USB 2.0 ports
- Two RJ-45 ports (dual Gigabit NIC) with activity and link indicators
- RJ-45 port (dedicated for management NIC) with activity and link indicators
- Serial (DB-9) port
- SVGA (DB-15) port
- System LED and button
- QDR Infiniband port (AW170htq F1 only)

Optical drive
- External USB only

Chassis/form factor
- 2U rack-optimized
- 2U chassis supporting two different node configurations:
  - AW170ht F1 and AW170htq F1

Power supply
- 2 Power Supplies Standard
- 1400 W 220 V 80 PLUS Gold level efficient power supply (1+1 redundant and hot-pluggable)

Regulatory Compliant Standards
EMC
- FCC (Class A)
- CE (Class A)
- BSMI (Class A)

Safety
- UL/cUL
- CB
- Nemko/GS

Technical Specifications

Dimensions (with bezel)	438 (W) x 724 (D) x 88 (H) mm (17.2 x 28.5 x 3.4 inches)	
Form factor	2U rack optimized	
Weight (approximate)	Maximum (All component slots and sockets fully populated)	35 kg (77 lbs.)
	Minimum (One HDD, power supply, and processor installed)	30.9 kg (68 lbs.)
System inlet temperature	Operating	10° - 35° C (50° - 95° F) at sea level with an altitude derating of 1° C per 305 m (1.8° F per 1000 ft.) above sea level to a maximum of 3050 m (10,000 ft.)
	Non-operating	-40° - 70° C (-40° - 158° F)
Relative humidity (non-condensing)	Operating	8 - 90 % relative humidity (Rh), 28° C (82.4° F) maximum wet bulb temperature, non-condensing
	Non-operating	5 - 95 % relative humidity (Rh), 38.7° C (101.7° F) maximum wet bulb temperature, non-condensing
Dielectric voltage withstand	Input to output	3000 VAC/minute
	Input to ground	500 VAC/minute
Maximum wet bulb temperature	Reference	41.3° C (106.3° F)
Emissions classification (EMC)	FCC rating	Class A
	Normative standards	CISPR 22, EN55022, EN55024, FCC CFR 47, Pt. 15, ICES-003, EN 61000-3-2, EN 61000-3-3, EN 60950-1, IEC 60950-1
Power supply	Input voltage	
	Rated input voltage	100 - 240 VAC
	Input	
	Rated input line	85 - 264 VAC
	Frequency range	50 - 60 Hz
	Rated input power	AC 100 - 140 V, 11 - 7.5 A, 50 - 6 Hz, 1100 W AC 100 - 240 V, 8 - 5 A, 50 - 60 Hz, 1400 W
	Rated input current	14 A at 100 VAC 6 A at 240 VAC
	Steady state power	1400 W at 240 VAC

Standard Features

Processors

Intel Xeon Six-Core processor

X5675 (12 MB L3 cache, 3.06 GHz, 6.4 GT/s, DDR3-1333 MHz, 95 W)

X5650 (12 MB L3 cache, 2.66 GHz, 6.4 GT/s, DDR3-1333 MHz, 95 W)

Intel Xeon Quad-Core processor

E5620 (12 MB L3 cache, 2.40 GHz, 5.86 GT/s, DDR3-1066 MHz, 80 W)

L5630 (12 MB L3 cache, 2.13 GHz, 5.86 GT/s, DDR3-1066 MHz, 40 W)

E5606 (8 MB L3 cache, 2.13 GHz, 4.8 GT/s, DDR3-1066 MHz, 80 W)

Chipset

Intel 5500 Chipset for AW170ht F1
Intel 5520 Chipset for AW170htq F1

Memory[4]	**Type**	DDR3 1066/1333 MHz Registered memory DDR3 1066/1333 MHz Unbuffered ECC memory
	DIMM sockets	12 per node
	Capacity	Registered DIMM: 2 / 4 / 8 / 16[5] GB Unbuffered ECC DIMM: 2 / 4 GB
	Maximum capacity	Registered DIMM: 192 GB Unbuffered DIMM: 48 GB
Memory protection	ECC, Mirroring, Lockstep and Sparing Mode, x4/x8 SDDC	
Network controller	2 x Integrated Intel 82574L single port Gigabit Ethernet Controller per node	

[4] Mixed use of registered memory and unbuffered ECC memory not supported.
[5] 16 GB memory modules available by special request only

Expansion slots

The primary I/O bus for the main board is PCIe Gen2. The following table lists the characteristics of the PCI-E bus segments.

Expansion Slot #	# of slots	Type	Bus Width[1]	Vol.	Con. Width	Form factor
PCIe	2	PCIe Gen 2	x8	3.3V	x16	Full height
PCIe (optional)[6]	1	PCIe Gen 2	x16	3.3V	x16	Full height/ Double Thick for GPU support

NOTE:

1. *"Bus Width" refers to the number of physical electrical lanes running to a PCIe® connector.*
2. *Default bus assignment (in decimal). Inserting cards with PCI™ bridges may alter the actual bus assignment number.*
3. *Slots are enumerated differently based on the operating system. Microsoft® operating systems enumerate Device ID by bus starting from the lowest bus to the highest.*

InfiniBand

- AW170ht F1 – Infiniband is supported in a PCI slot
- AW170htq F1 – QDR InfiniBand speed with IB controller: Mellanox ConnectX-2, MT25418B0-FCCR-QIS, 40 Gb/s (4X) with 1x QSFP connector

Storage controllers

Intel 82801JR (ICH10R) I/O Controller Hub per node

Integrated Serial ATA controller

Simultaneous drive transfer channels	6 channels
Transfer rate synchronous (maximum theoretical)	3 GB/s per channel
Data transfer method	non-RAID mode RAID mode
Drive support	Serial ATA
Data transfer modes	Legacy mode Combined mode
Protocol	Serial ATA
Feature	NCQ (Native Command Queuing) AHCI (Advanced Host Controller Interface) RAID (Redundant Array of Independent Disks)
RAID levels supported	0, 1, 5, 10
RAID features	• Supports multiple logical volumes • Supports setup through ROM based array configuration utility installation scripting **NOTE**: This controller requires the software RAID driver to support hot-plug functions.
RAID OS support	Windows Server® 2008 Windows Server® 2008 R2 Red Hat® Enterprise Linux 5.3 Novell® SuSE® Linux Enterprise Server 11

[6] Available on GPU models only

Embedded single-port Gigabit server controller (2 x Intel 82574L for dual port total)	**Network interface**	10Base-T 100Base-TX 1000Base-T	
	Compatibility	IEEE 802.3 10Base-T IEEE 802.3ab 1000Base-T IEEE 802.3u 100Base-TX	
	Data transfer method	One lane (x1)	
	Network transfer rate	10Base-T (half-duplex)	10 Mb/s
		10Base-T (full-duplex)	20 Mb/s
		100Base-TX (half-duplex)	100 Mb/s
		100Base-TX (full-duplex)	200 Mb/s
		1000Base-TX (half- and full-duplex)	2000 Mb/s
	Connector	RJ-45	
	Cable support	CAT 5e wire	
	Manageability	NC-SI, SMBus, PXE, iSCSI boot	

Storage

Maximum internal storage	**Hard disk drive**	• Up to 12 hot-pluggable 3.5" SATA HDD (6 per node)
	3.5” Maximum capacity	• Up to 24 TB SATA • Up to 6 TB per node

Drive Support – Optical and Hard Disk Drive

Optical Drive Support

Drive	Bay Supported	Required Controller
Optical Drive	External Only	USB 2.0

Hard Disk Drive Support

Node	Drive	Quantity Supported	Bay Supported	Required Controller
A	3.5” SATA hard drive	Up to 6	A0 – A5	Integrated SATA controller for up to 6 SATA HDD’s
B	3.5” SATA hard drive	Up to 6	B0 – B5	Integrated SATA controller for up to 6 SATA HDD’s
NOTE: Transfer rates of drives are dependent on the maximum transfer rate supported by the host bus adapter (HBA) or controller.				

Tape Backup Drive Support

Drive	Bay Supported	Required Controller
LTO-3 1U SAS Rackmount (external) Tape Drive kit	External	SAS card

Graphics

Integrated Matrox G200eW graphics per node
- 1280 x 1024 32b at 60 Hz 5:4 aspect ratio
- 16 MB video memory

Industry standard compliance

IPMI 2.0 Compliant (iBMC)
SMBIOS 2.61 Compliant
SMBUS 2.0
ACPI v3.0b Compliant
PCI Express Generation 2.0
PCI 2.3 Compliant
PXE support
WOL support
Microsoft Windows Hardware Logo Program Requirements

Security

Administrator password
Power-on password
Device boot control
Setup password

System cooling

- 2 x CPU heat-sinks supporting Intel® Xeon® processors with up to TDP 95 W per node with / without GPU card
- Two 80 x 80 x 38mm system fans with PWM controlled by node.
- One air shroud per node
- Support for full-height/ full length GPU card

Operating systems and virtualization software support

- Windows® Server® 2008
- Windows® Server® 2008 R2
- Windows® Server® 2003 R2
- Red Hat® Enterprise Linux 5.4
- SuSE® Linux Enterprise Server 11
- VMware ESXi™ 4
- VMware ESX™ 4

Server Management Utilities and Applications

Comprehensive management solutions deliver powerful and intuitive management features to simplify server set ups, configuration, management, monitoring, and reporting for the entire lifecycle of servers. Centralized administration and automatic management with remote access control free the IT resources and meet the complex business environment. Proactive monitoring and notification lead higher customers' satisfaction and higher levels of operational efficiency.

Smart Setup 2.0	Easy deployment via the latest version of Acer's Smart Setup. Smart Setup is available both in box as a driver packed installation DVD or a downloadable file to be put into a USB 2.0 device, and eases the deployment of Acer servers for any certified OS. Through its unique interface, users may select to have all the correct drivers be pre-deployed for the OS of their choosing, as well as setup hardware RAID devices, BMC settings (where available), and even clone the pre-settings to a bootable USB device to ease mass server deployments.
Smart Console	Web-based management utility to simplify system management with embedded iBMC, system monitoring and alerting, event handling, remote power control and KVM-over-IP. Smart Console is OS independent and offers virtual media through floppy, ODD, and removable disk.
Smart Server Manager v1.1	Offering 24-7 monitoring for system health and performance. Delivers proactive event management features including system event logging, event handling from e-mail and SNMP Trap (PET) alerting. Monitors onboard hardware, operating systems and virtual machines Allows remote control from KVM and Power control Satisfies management in web-based UI, role-based administration, and automated management scripts.
Intelligent manageability	• Automatic Server Recovery (ASR) • Integrated Management Log • Front and Rear Unit ID (UID) button/LED • BIOS Update tool for DOS supporting DOS and Windows OS • IPMI Firmware Update tool supporting DOS and Windows OS • Backplane firmware update tool, supporting DOS and Windows OS
Environment-friendly products and approach	Acer offers end-of-life product return, trade-in, and recycling programs in many geographic areas. Products returned to will be recycled, recovered or disposed of in a responsible manner.

Memory Support Specification

Registered type	DDR3 1066/ 1333 MHz
	Capacity: 2, 4, 8, 16 GB
	Voltage: 1.5 V
	Maximum: 192 GB per node (16 GBx12 DIMMs)
Unbuffered type	DDR3 1066/ 1333 MHz
	Capacity: 2, 4 GB
	Voltage: 1.5 V
	Maximum: 48 GB per node (4 GB x 12 DIMMs)

Note: Mixed use of registered memory and unbuffered ECC memory not supported.
16 GB memory modules available by special request only

Memory Population

The systems have twelve DIMM slots per node. Each CPU controls six slots. The DIMM slots support DDR3-1333 registered/unbuffered ECC memory modules.

- Each CPU has three memory channels (channel 1, 2 and 3)
- Each channel has 2 slots

The socket furthest from the CPU is socket A **(P1DIMM1A, P1DIMM2A, P1DIMM3A in blue color)**, while the nearest is socket B **(P1DIMM1B, P1DIMM2B, P1DIMM3B in black)**. For all memory modes, socket A in each channel needs to be populated first. If socket A is empty, socket B cannot be used. It is recommended that the higher rank and largest capacity DIMM be installed in slot A.

NOTE:

- In a single-processor server, memory modules are installed into the P1DIMMxx slots.
- The P2DIMMxx slots are enabled when a second CPU is installed on the main board.

For the system to function properly, DIMM modules must be installed following the slot sequence listed below. DIMM modules of the same type, size and manufacturer must be installed in the same DIMM colored slots.

- CPU 1 – populate DIMM slot P1DIMM1A first, followed by slots P1DIMM2A, P1DIMM3A, P1DIMM1B, P1DIMM2B, P1DIMM3B.
- CPU 2 – populate DIMM slot P2DIMM1A first, followed by slots P2DIMM2A, P2DIMM3A, P2DIMM1B, P2DIMM2B, P2DIMM3B.

DIMM slot notation illustrated in table below:

CPU1 (Rear CPU)	P1DIMM1B	P1DIMM1A	P1DIMM2B	P1DIMM2A	P1DIMM3B	P1DIMM3A
	Black	**Blue**	**Black**	**Blue**	**Black**	**Blue**

CPU2 (Front CPU)	P2DIMM1B	P2DIMM1A	P2DIMM2B	P2DIMM2A	P2DIMM3B	P2DIMM3A
	Black	**Blue**	**Black**	**Blue**	**Black**	**Blue**

Independent mode (please refer to the User Guide for more information)

- In this mode all memory is accessible and ECC protected

Single-processor configuration

Total Memory	P1 1B	P1 1A	P1 2B	P1 2A	P1 3B	P1 3A
2GB		2GB				
4GB		2GB		2GB		
6GB		2GB		2GB		2GB
8GB	2GB	2GB	2GB	2GB		
12GB	2GB	2GB	2GB	2GB	2GB	2GB
4GB		4GB				
8GB		4GB		4GB		
12GB		4GB		4GB		4GB
16GB	4GB	4GB	4GB	4GB		
24GB	4GB	4GB	4GB	4GB	4GB	4GB
8GB		8GB				
16GB		8GB		8GB		
24GB		8GB		8GB		8GB
32GB	8GB	8GB	8GB	8GB		
48GB	8GB	8GB	8GB	8GB	8GB	8GB
16GB*		16GB				
32GB*		16GB		16GB		
48GB*		16GB		16GB		16GB
64GB*	16GB	16GB	16GB	16GB		
96GB*	16GB	16GB	16GB	16GB	16GB	16GB

** 16 GB memory modules available by special request only*

Dual-processor configuration

	CPU1						CPU2					
Total Memory	P1 1B	P1 1A	P1 2B	P1 2A	P1 3B	P1 3A	P2 1B	P2 1A	P2 2B	P2 2A	P2 3B	P2 3A
4GB		2GB						2GB				
8GB		2GB		2GB				2GB		2GB		
12GB		2GB		2GB		2GB		2GB		2GB		2GB
16GB	2GB	2GB	2GB	2GB			2GB	2GB	2GB	2GB		
18GB	2GB	2GB	2GB	2GB	2GB	2GB		2GB		2GB		2GB
24GB	2GB	2GB	2GB	2GB	2GB	2GB	2GB	2GB	2GB	2GB	2GB	2GB
8GB		4GB						4GB				
16GB		4GB		4GB				4GB		4GB		
24GB		4GB		4GB		4GB		4GB		4GB		4GB
32GB	4GB	4GB	4GB	4GB			4GB	4GB	4GB	4GB		
36GB	4GB	4GB	4GB	4GB	4GB	4GB		4GB		4GB		4GB
48GB	4GB	4GB	4GB	4GB	4GB	4GB	4GB	4GB	4GB	4GB	4GB	4GB
16GB		8GB						8GB				
32GB		8GB		8GB				8GB		8GB		
48GB		8GB		8GB		8GB		8GB		8GB		8GB
72GB	8GB	8GB	8GB	8GB	8GB	8GB		8GB		8GB		8GB
96GB	8GB	8GB	8GB	8GB	8GB	8GB	8GB	8GB	8GB	8GB	8GB	8GB
64GB*		16GB		16GB				16GB		16GB		
96GB*		16GB		16GB		16GB		16GB		16GB		16GB
128GB*	16GB	16GB	16GB	16GB			16GB	16GB	16GB	16GB		
144GB*	16GB	16GB	16GB	16GB	16GB	16GB		16GB		16GB		16GB
192GB*	16GB	16GB	16GB	16GB	16GB	16GB	16GB	16GB	16GB	16GB	16GB	16GB

** 16 GB memory modules available by special request only*

Mirroring mode:

- In mirroring mode, the memory contains a primary image and a copy of the primary image therefore the effective size of memory is reduced by one half.
- Channel 3 has no function in these modes.
- Follow the population rules described in independent mode.
- Mirroring mode needs the channel 1 & channel 2 DIMMs to be identical. DIMM slot populations within a channel do not have to be identical but the same DIMM slot location across channel 1 and channel 2 must be the same. DIMM1A and DIMM2A should be the same type, size and manufacturer. DIMM1B and DIMM2B memory should be the same type, size and manufacturer. DIMM1C and DIMM2C memory should be the same type, size and manufacturer.
- Same rules apply to CPU2.
- Please refer to the User Guide for complete population rules for both single and dual processor configurations.

Lockstep mode:

- In Lockstep Channel Mode, each memory access is 128-bit data access that spans Channel 1 and Channel 2. This is done to support SDDC for DRAM devices with 8-bit wide data ports. The same address is used on both channels such that an address error on any channel is detectable.
- Lockstep Channel mode is the only RAS mode that supports x8 SDDC.
- Channel 3 has no function in these modes.
- Follow the population rules described in independent mode.
- Lockstep mode needs the channel 1 & channel 2 DIMMs to be identical. DIMM slot populations within a channel do not have to be identical but the same DIMM slot location across channel 1 and channel 2 must be the same. DIMM1A and DIMM2A should be the same type, size and manufacturer. DIMM1B and DIMM2B memory should be the same type, size and manufacturer. DIMM1C and DIMM2C memory should be the same type, size and manufacturer.
- Same rules apply to CPU2.
- Please refer to the User Guide for complete population rules for both single and dual processor configurations.

Sparing mode:

- In sparing mode, if the system detects degrading memory, the data in the failed channel will be copied to the spare channel. The failed channel is then isolated and the spare channel becomes active. Any uncorrectable error detected before the isolation will cause the system to stop normal operation.
- Channel 3 is the spare channel. Therefore, the effective size will be reduced by one-third.
- Follow the population rules described in independent mode.
- Sparing mode needs all three channels to utilize identical DIMMs. 1A, 2A and 3A should be the same type, size and manufacturer. 1B, 2B and 3B memory should be the same type, size and manufacturer. 1C, 2C and 3C memory should be the same type, size and manufacturer.
- Same rule is applied to CPU2.
- Please refer to the User Guide for complete population rules for both single and dual processor configurations.

Memory Identification

Generally, there is memory information printed on the label of the DIMM, but different vendors may have different formats. For example:

4GB 2Rx4 PC3-10600R xx xx xxx

1. Density

- 2GB, 4GB, 8GB, 16GB
- Intel® Xeon® 5600 series processors support DIMMs organized by 1Gb, 2Gb or 4Gb DRAM chips

2. Rank

- 1R = Single Rank
- 2R = Dual Rank
- 4R = Quad Rank

3. Bit Organization

- This platform supports x4 and x8
- Note: It's not recommend to mix DIMMs with different bit organizations in one system

4. Speed

- PC3 – 6400 => DDR3- 800
- PC3 – 8500 => DDR3- 1066
- PC3 – 10600 => DDR3- 1333

Power Specification

1400 W Power Supply							
Operational input voltage range (Vrms)	100 - 240 VAC						
Frequency range (nominal) (Hz)	50 / 60						
Nominal input voltage (Vrms)	**100**	**120**	**208**	**200**	**220**	**230**	**240**
Maximum rated output wattage	1100	1100	1400	1400	1400	1400	1400
Nominal input current (A rms)	13.36	11.04	8.01	7.89	7.21	6.88	6.55
Maximum rated input wattage rating (Watts)	1336	1323	1666	1578	1586	1582	1572
Maximum rated VA (Volt-Amp)	1328	1320	1657	1569	1577	1573	1563
Efficiency (%) at maximum rated output wattage	87.16	87.32	88.30	88.62	88.85	89.07	89.93
Power factor	0.994	0.996	0.995	0.994	0.994	0.994	0.994
Leakage current (mA)	0.51	0.62	1.03	1.05	1.15	1.20	1.25
Maximum inrush current (A peak)	17.4	17.5	17.6	17.9	18.1	17.5	17
Maximum inrush current duration (mS)	4.70	4.69	4.77	4.72	4.67	4.71	4.75
Maximum British thermal unit rating (BTU/hr.)	3753.2	3753.2	4776.8	4776.8	4776.8	4776.4	4776.8

1 KW = 3412 BTU/hr.

Hardware Key Options/Components

CPU	• Intel® Xeon® 5600 series
HDD	• SATA 3.5”: 250 GB, 500 GB, 1TB, 2 TB
Memory	• DDR3 1333 MHz Unbuffered ECC 2/ 4 GB • DDR3 1333 MHz Registered ECC 2/ 4/ 8/ 16GB
SAS HBA	• SAS HBA, internal 2-ports, external 2-ports, PCI-E x1
Networking	• Gigabit CT Desktop Adapter, Gigabit Adapter10/100/1000 Mbps connection for PCI Express • Gigabit ET Server Adapter, Gigabit 10/100/1000 Mbps, PCIe, dual-port • Gigabit ET2 Server Adapter, Gigabit Adapter 10/100/1000 Mbps, PCIe, quad-port • Ethernet Server Adapter X520-DA2, 10 Gb, Dual ports, direct attach • Ethernet Server Adapter X520-LR1, single port, LR • Ethernet Server Adapter X520-SR1, single port, SR • Ethernet Server Adapter X520-SR2, dual ports, SR
Tape and disk-based backup	• LTO-3 1U SAS Rackmount (external) Tape Drive kit • LTO-4 1U SAS Rackmount (external) Tape Drive kit
TPM	• TPM module (TPM 1.2)
Fibre channel HBA	• Qlogic SANblade® QLE2460 single port fibre channel to PCI express host bus adapter, 1 ch, 8 Gb FC HBA, PCIe x8, single LC port (std & low-profile bracket) • Qlogic SANblade® QLE2462 dual ports fibre channel to PCI express host bus adapter, 2ch, 8 Gb FC HBA, PCIe x8, dual LC port (std & low-profile bracket)
Rackmount kits	• Sliding rails (Cable Management Arm option not available)

Service and Support

Acer Servers offers a comprehensive service suite to take care of your hardware investment. Users can select the 1-year standard warranty or choose extended warranties and services[7].

The standard warranty for the AW2000ht F1 series includes one year Parts including Labor and On-Site coverage.

Warranty repairs may be accomplished through the use of Customer Replacement Unit (CRU) parts. CRU parts include: Hot Plug Hard Drives and Hot Plug Power Supplies. These parts are designed for easy replacement without tools. Travel and labor charges may apply if customers decline to replace a CRU part.

In a continuing effort to improve the quality of our products, information in this document is subject to change without notice. Images shown are only representations of some of the configurations available for this model. Availability may vary depending on region.

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[7] Extension warranty services vary by country. Please contact Acer authorized resellers for more information.

Acer Standard Server Models	**Part Number**
Acer AW2000ht-AW170ht LFF Models	
Acer AW2000ht-AW170ht F1, Two Nodes each with: 1x Xeon E5606, 2x4GB Reg, no HDD, no Infiniband, 2x GBit LAN onboard, Acer Smart Setup, Acer Smart Manager. System comes with 1x Hot Swap 1400W PSU, UPS Power Cable; second PSU optional, Rail kit (2U) Included	TG.R7800.012
Acer AW2000ht-AW170ht F1, Two Nodes each with: 1x Xeon E5620, 2x4GB Reg, no HDD, no Infiniband, 2x GBit LAN onboard, Acer Smart Setup, Acer Smart Manager. System comes with 1x Hot Swap 1400W PSU, UPS Power Cable; second PSU optional, Rail kit (2U) Included	TG.R7800.002
Acer AW2000ht-AW170ht F1, Two Nodes each with: 1x Xeon L5630, 2x4GB Reg, no HDD, no Infiniband, 2x GBit LAN onboard, Acer Smart Setup, Acer Smart Manager. System comes with 1x Hot Swap 1400W PSU, UPS Power Cable; second PSU optional, Rail kit (2U) Included	TG.R7800.006
Acer AW2000ht-AW170ht F1, Two Nodes each with: 1x Xeon X5650, 2x4GB Reg, no HDD, no Infiniband, 2x GBit LAN onboard, Acer Smart Setup, Acer Smart Manager. System comes with 1x Hot Swap 1400W PSU, UPS Power Cable; second PSU optional, Rail kit (2U) Included	TG.R7800.004
Acer AW2000ht-AW170ht F1, Two Nodes each with: 1x Xeon X5675, 2x4GB Reg, no HDD, no Infiniband, 2x GBit LAN onboard, Acer Smart Setup, Acer Smart Manager. System comes with 1x Hot Swap 1400W PSU, UPS Power Cable; second PSU optional, Rail kit (2U) Included	TG.R7800.013
Acer AW2000ht-AW170htq F1, Two Nodes each with: 1x Xeon E5606, 2x4GB Reg, no HDD, QDR Infiniband, 2x GBit LAN onboard, Acer Smart Setup, Acer Smart Manager. System comes with 1x Hot Swap 1400W PSU, UPS Power Cable; second PSU optional, Rail kit (2U) Included	TG.R7800.014
Acer AW2000ht-AW170htq F1, Two Nodes each with: 1x Xeon E5620, 2x4GB Reg, no HDD, QDR Infiniband, 2x GBit LAN onboard, Acer Smart Setup, Acer Smart Manager. System comes with 1x Hot Swap 1400W PSU, UPS Power Cable; second PSU optional, Rail kit (2U) Included	TG.R7800.008
Acer AW2000ht-AW170htq F1, Two Nodes each with: 1x Xeon X5650, 2x4GB Reg, no HDD, QDR Infiniband, 2x GBit LAN onboard, Acer Smart Setup, Acer Smart Manager. System comes with 1x Hot Swap 1400W PSU, UPS Power Cable; second PSU optional, Rail kit (2U) Included	TG.R7800.009
Acer AW2000ht-AW170htq F1, Two Nodes each with: 1x Xeon X5675, 2x4GB Reg, no HDD, QDR Infiniband, 2x GBit LAN onboard, Acer Smart Setup, Acer Smart Manager. System comes with 1x Hot Swap 1400W PSU, UPS Power Cable; second PSU optional, Rail kit (2U) Included	TG.R7800.015
Acer AW2000ht-AW170htq F1, Two Nodes each with: 1x Xeon L5630, 2x4GB Reg, no HDD, QDR Infiniband, 2x GBit LAN onboard, Acer Smart Setup, Acer Smart Manager. System comes with 1x Hot Swap 1400W PSU, UPS Power Cable; second PSU optional, Rail kit (2U) Included	TG.R7800.011

Acer Key Options	**Part Number**
Acer CPU Heatsink	
Note: one heatsink required for each processor option kit	
Acer Intel CPU heat-sink (TDP 95W supported) for 1U rack, Gemini, and blade server	TC.34900.005
Acer Processor upgrade kits	
Note: one heatsink required for each processor option kit	
Note: all processors in a system must match	
Acer Intel® Xeon® processor E5606 (B-1) Kit	TC.32500.041
Acer Intel® Xeon® processor E5620 (B-1) Kit	TC.32500.024
Acer Intel® Xeon® processor L5630 (B-1) Kit	TC.32500.026
Acer Intel® Xeon® processor X5650 (B-1) Kit	TC.32500.022
Acer Intel® Xeon® processor X5675 (B-1) Kit	TC.32500.039
Acer Memory	
Note: cannot mix Unbuffered memory with Registered memory	
Note: please refer to "Memory Support" Section for details on configuring memory	
Acer Unbuffered Memory	
Acer 2GB DDR3-1333 Unbuffered Memory Kit (1 pc.)	TC.33100.035
Acer 4GB DDR3-1333Unbuffered Memory Kit (1 pc.)	TC.33100.037
Acer Registered Memory	
Acer 2GB DDR3-1333Registered Memory Kit (1 pc.)	TC.33100.029
Acer 4GB DDR3-1333Registered Memory Kit (1 pc.)	TC.33100.031
Acer 8GB DDR3-1333Registered Memory Kit (1 pc.)	TC.33100.042
Acer Storage	
Acer SATA Hot Plug LFF (3.5-inch) Midline (MDL) Drives	
Acer 250GB 3Gb/s 7.2K 3.5-inch Enterprise SATA HDD Kit	TC.32700.068
Acer 500GB 3Gb/s 7.2K 3.5-inch Enterprise SATA HDD Kit	TC.32700.066
Acer 1TB 3Gb/s 7.2K 3.5-inch Enterprise SATA HDD Kit	TC.32700.064
Acer 2TB 3Gb/s 7.2K 3.5-inch Enterprise SATA HDD Kit	TC.32700.062
Acer SAS Storage Controllers	
Acer 4-port (2 int., 2 ext.) 3Gb/s SAS HBA	TC.32300.008
Acer Fibre Channel Storage Controllers	
Acer 8Gb/s Single Port Fibre Channel HBA Kit	TC.32300.024
Acer 8Gb/s Dual Port Fibre Channel HBA Kit	TC.32300.026
Acer Tape Drives	
Acer LTO-3 1U Rackmount (ext.) Tape Drive Kit	TC.34000.008
Acer LTO-4 1U Rackmount (ext.) Tape Drive Kit	TC.34000.009

Acer Additional Upgrades	
Acer Gigabit Single Port LAN Adapter Kit	TC.32200.011
Acer Gigabit Dual Port Server LAN Adapter Kit	TC.32200.009
Acer Gigabit Quad Port Server LAN Adapter Kit	TC.32200.010
Acer 10 Gigabit Dual Port (DA) Server LAN Adapter Kit	TC.32200.012
Acer 10 Gigabit Single Port (SR) Server LAN Adapter Kit	TC.32200.014
Acer 10 Gigabit Single Port (LR) Server LAN Adapter Kit	TC.32200.013
Acer 10 Gigabit Dual Port (SR) Server LAN Adapter Kit	TC.32200.015
Acer Operating Systems	
Windows Server Enterprise 2008	
Acer ROK Windows SVR 2008 R2 Enterprise (64bit,25Clt,EN)	TC.34400.035
Acer ROK MICROSOFT Win SVR 2008 64bit Ent R2 10 Clt EN W/COA W/CD/DVD ACER 1-8CPU	TC.34400.034
Windows Server Standard 2008	
Acer ROK MICROSOFT Win SVR 2008 64bit Std R2 5 Clt EN W/COA W/CD/DVD ACER 1-4CPU	TC.34400.033
Windows Server Web Edition	
Acer ROK MICROSOFT Windows Server 2008 R2 Web(64bit,EN) Kit	TC.34400.075
Microsoft CAL's	
Acer Windows Server 2008 CAL EN (5 Device)	TC.34400.061
Acer Windows Server 2008 CAL EN (5 User)	TC.34400.063
Acer Services	
Acer Upgrade from 1 year Parts/1 year Labor/1 year On-Site to 3 years Parts/Labor/On-site Service	146.AD314.005
Acer Upgrade from 1 year Parts/1 year Labor/1 year On-Site to 3 years Parts/Labor/On-site Service with 4hr response	146.AD316.008